UK Wins Race to First All Band License with 5 Words-Per-Minute Code!

We disclosed in our June, 1, 1998 *Report* that the *Radio Society of Great Britain,* UK's national Amateur Radio society, would no longer be supporting Morse code proficiency as a licensing requirement for HF operation. That information was based on a supposedly confidential letter sent out from RSGB headquarters to its volunteers in the field, a copy of which was made available to us.

We discussed the letter with RSGB president Ian J. Kyle, GI8AYZ at the 1998 Dayton HamVention. He said that while the Morse requirement was IARU policy, he felt it could not be sustained and that the RSGB would be entering into talks with both the IARU and RA for a change. "Mandatory testing of Morse is going to go whether we like it or not."

Kyle confirmed that RSGB members would indeed be notified that their Council had agreed in April 1998 to open a discussion with the UK Regulatory Agency "...to begin a process of liberalizing access to the HF amateur bands." He called it a "first step" towards granting full access to the HF bands to existing no-code licensees who pass the 5 words-per-minute Morse examination.

RSGB General Manager Peter Kirby, G0TWW - who was also at the 1998 Dayton HamVention - told us that any new UK easing of the Morse code restrictions would be a temporary fix until the compulsory Morse requirement could be dropped altogether.

The RSGB believes that the international Morse requirement for HF ham band operation will eventually be abolished. We later heard that the encouragement for change really came from the UK Regulatory Agency and not the RSGB, but we were never able to confirm that.

Bombshell dropped on May 21, 1999

A joint press release has now been issued by the RSGB and the RA. It states (and we quote):

New License Sets the Scene for the New Millennium

UK Amateur Radio Licensing is about to undergo the most exciting changes seen since the introduction of the Novice License in 1991.

Two major initiatives will allow greater access to the full range of facilities that Amateur Radio has to offer, and broaden the appeal of the hobby to a wider audience. More amateurs will have the opportunity to experience worldwide communications, and newcomers to the hobby will find it possible to make contacts on a wider range of frequencies.

These substantial improvements stem from discussions between the *Radio Society of Great Britain* and the *Radiocommunications Agency,* following consultation with the Amateur Radio community carried out by both organizations.

A new class of license, to be known as the A/B license, and which will use the callsign series M5xxx, is to be introduced in the early autumn. This will provide access to all amateur bands, on passing

the Radio Amateurs Examination and a 5 words-per-minute Morse test. 100 Watts PEP output will be allowed on the bands below 30 MHz (the HF bands); and 400 Watts PEP output above.

The Novice A *[which permits low power HF operation]* and Novice B *[no code]* licenses will be enhanced in the summer to allow a higher transmitted power than at present. The power output will go up to 10 Watts PEP. New frequencies will include the 144 MHz band, an SSB allocation on 3.5 MHz and the extension of the existing Novice HF allocation to include the QRP CW calling frequencies.

It is expected that the World Radio Conference to be held in 2002 or 2003 will agree to the removal of mandatory Morse testing for access to frequencies below 30 MHz. Following that decision, the existing license structure will be replaced with an incentive-based system. In the meantime, discussions are under way to ensure that Morse and data sub-bands are safeguarded by incorporating them into license schedules.

In summary, the improvements are:
- Access to the HF bands with a lower Morse test speed
- The Class A/B licence to provide access to all HF bands at the 100 Watt PEP level
- Higher output power on all Novice bands
- Wider allocations on existing Novice bands
- Access to 144MHz for Novice licensees
- Safeguards for Morse and data sub-bands
- In the longer term, the introduction of an incentive-based licensing system

The RSGB and the RA are hopeful that these initiatives will provide a more attractive path into Amateur Radio, at the same time as increasing the facilities available to existing radio amateurs. These measures, together with the new license structure, which will be put into place after a future WRC, will provide a healthy future for Amateur Radio well into the 21st century.

For further information, contact: Specialist Sectors Unit, Radiocommunications Agency, New King"s Beam House, 22 Upper Ground, London SE1 9SA [or the] Radio Society of Great Britain, Lambda House, Cranborne Road, Potters Bar, Herts EN6 3JE [End of press release.]

The *Radio Amateurs Examination* (RAE) is a written examination that is currently administered by the City and Guilds vocational/educational testing organization in London. Starting this fall, the questions appearing in the RAE will be expanded and the question bank released to the public. Examinations will also be more widely available - possibly every month or "on demand" at a hamfest - rather than the two current examination dates a year. Procedures that permit amateur radio clubs to act as registered City and Guilds examination centers will be relaxed and expanded.

The new UK ham license line up

Previously there were two classes, A and B. The "A" license offered all band privileges, the "B" license offered only the bands above 30 MHz. There were two versions of the Novice license. The "Novice A" permitted HF operation, the "Novice B" permitted operation above 30 MHz..

UK Novices now get to operate on 2 meters: 144-146 Mhz. (There is no 146-148 amateur allocation in the U.K.) The new "Full A/B" also has two versions: an HF and a VHF and higher version. Here is the run down:

License :
Requirements, Privileges, Power, CEPT & Notes

Full A
RAE + 12 wpm, All Bands, 400 W, CEPT Class 1

Full A/B
RAE + 5 wpm, All Bands below 30 MHz, 100 W, CEPT Class 2 – M5xxx call signs

Full A/B
RAE + 5 wpm, Above 30 MHz, 400 W, CEPT Class 2

Full B
RAE, All bands above 30 MHz, 400 W, CEPT Class 2, Eligible for A/B license on passing 5 wpm code.

Novice A
NRAE + 5wpm, All Novice Bands, 10 W Power - increased and wider bands on 3.5, 10, 21 and 28 MHz. Telephony, Data, RTTY on 3.5 MHz. Additional allocation on 144 MHz.*

Novice B
NRAE + 5wpm, All Novice Bands above 30 MHz, 10 W Maximum power increased to 10 W, Additional allocation at 144 Mhz.*

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* New Novice allocations to be: 1950-2000 kHz (no change); 3550-3600 kHz Morse, Data; 3600-3650 kHz Morse, RTTY, telephony (was 3560-3585 kHz Morse only); 10110-10140 kHz (was 10130-10140 kHz); 21050-21149 kHz (was 21100-21149 kHz); 28050-28190 kHz (was 28060-28190 kHz); 28225-28500 kHz (no change); 50.000-52.000 MHz (no change); 144.000-146.000 MHz (new allocation); bands 432 MHz and above remain unchanged. [RAE = Radio Amateurs Examination, NRAE = Novice Radio Amateurs Examination.]

The Novice license changes are expected to be implemented this summer, and the new Class A/B license will come about in the fall.

RECENT FCC ENFORCEMENT ACTIONS

A settlement has been reached in the K7IJ Grizzly Peak (San Francisco Bay Area) repeater case and they are back on the air. The terms of the settlement as laid down by FCC's Riley Hollingsworth K4ZDH are:

1.) At all times that K7IJ repeaters are operating, there will be a live, real time control operator, listening to the communications. The control operator may be the licensee or a licensed operator chosen by the licensee.

2.) An audio stream will be configured for that the Commission may monitor the repeaters any time the repeaters are on.

3.) Stations coming on to the repeaters, if not known by the control operator, will be asked to identify at the beginning of their transmission, not just after ten minutes.

4 a) If unlicensed stations come on to the repeaters, an announcement will be made by the Control Operator that the repeater does not welcome or tolerate unlicensed users. In cases where unlicensed operators persist in communications over the repeater, the repeater will be turned off by the Control Operator and the matter reported to the Commission.

b) When licensed stations are not abiding by Commission rules in their operation on the repeaters, they will be asked to correct their operation to comply with the Amateur rules. In cases where a licensed operator persists in violating Commission rules, the Control Operator, on a case-by-case basis may decide to (1.) Turn the repeater off, or (2) leave the repeater in operation and report the matter to the Commission.

c) In both situations above, the responsibility of the licensee of K7IJ is subject to the provisions of Section 97.205(g) of the Commission's Rules relating to inadvertent retransmissions of repeaters.

5.) No further action will be taken against K7IJ or Blake Jenkins, N6YSA, if the repeaters are operated in accordance with these conditions.

But this settlement does not close the cases on those individuals whose licenses were set aside or sent warning letters.

Jim Walker, KF6VAA of Oakland, CA has been sent a final warning. The FCC said it has evidence that he operated on the WA6SEK repeater (145.21 MHz) after his license had been set aside due to operating on the K7IJ repeater prior to obtaining a license..

Timmy O. Sheen, Jr., N6MZA of Sacramento, CA, **Luis A. Caraballo, Jr., N7PLC** of Las Vegas, NV, **William B. Gifford, KF6URY** of Stockton, CA, and both **Roger G. Morgan, KB5URM** and **Steve P. Bazar, KC5LOT** of San Antonio, TX have been ordered to retake their Technician and/or Tech Plus examinations at FCC's Field Offices. **John R. Hamby, WB4UZW** of Winston-Salem, NC was ordered to retake his Amateur Extra Class examinations with the ARRL/VEC before July 15, 1999. Their licenses will be canceled if they fail to appear for re-examination.

Both Sheen and Gifford were monitored deliberately interfering with repeater operations for several hours. Their licenses were modified to prohibit operation on frequencies above 30 MHz for a period of 90 days. They were given 30 days to protest. The modification order expires on August 26, 1999 if they fail to respond.

Rusty Leewright, KE6UOF of Northridge, CA, **Joseph F. Faccone, Esquire, N2RGZ** and **Joseph C. Walker, W8JCW** of Gaylord, MI did not appear as ordered to retake their license examinations. Their licenses have been canceled. Continued operation will subject them to criminal prosecution.

Jeffrey C. Dressler, KF6VOT of Cypress, CA has had his Technician license set aside to enable the FCC time to determine what action to take in regard to allegations of unlicensed operation on the W6NUT (Los Angeles area) repeater. Any further operation will subject Dressler to a fine and seizure of his transmitting equipment.

Larry E. Teel, KJ7QP reportedly has operated Slow Scan TV signals that may have caused interference to ongoing communications on 14.236 MHz. "By general agreement, Slow Scan is to be transmitted at or around 14.230 MHz, as low as 14.228 and as high at 14.232," Hollingsworth said. "To avoid enforcement action" Teel has been asked to alter his operating habits.

Uotome Motoaki, W9BO of Saipan has had 14 club call signs and 12 vanity call signs issued to him during the past 30 days for amateur organizations in various states set aside. Additionally, Motoaki holds an additional 8 call signs granted more than 30 days ago. These call signs include several preferential (1-by-2 and 2-by-1 format) call signs (including: K3MH, K7AH, W1BA, W3AN, W2AN, WH8A, WH7J, KH8J and W1BT) He has been asked to provide justification as to the need for each of these call signs. "Where you are claiming that they are used by clubs, provide a list of the names, addresses and telephone numbers of the members, meeting times and dates within the past year, proposed meeting times and locations within the coming year, and copies of minutes, if any, taken at meetings within the past three months. ...We intend to cancel all of the listed call signs if you have not satisfactorily responded to this letter within 30 days," Hollingsworth said.

Richard L. Whiten, WB2OTK of Easely, S.C. failed to answer three of the questions put to him "...to determine what action to take..." on allegations of his broadcasting profanity/obscenity and intentional interference. He has been given 14 days to provide the information or face license revocation.

David O. Castle, WA9KJI of Evansville, IN is charged with "broadcasting and talking to no particular station for over an hour (on May 1, 1999), during which time you prevented the use of the frequencies by others and maliciously interfered with other stations attempting to use the frequencies." There were also other instances of improper conduct. Castle's license has been modified to prohibit operation on HF frequencies below 30 MHz for a period of two years (until May 19, 2001.)

CUTTING EDGE TECHNOLOGY

■ **The next big threat to ham radio will be the wireless Internet** as the web jumps out of the desk-top PC and into laptop and walk-around hand-held devices.

Several wireless services already send stock quotes, weather, news and sports headlines, and horoscopes to mobile customers. It is only a matter of time before Dick Tracy-like gadgets will be capable of receiving and transmitting images, video, digital data (paging) and voice. Competition will drive the cost down to consumer level. Everyone will eventually have their own two way radio.

■ **Intel Corp., the world's largest chip maker, is already testing a wireless device about the size of an Etch-a-Sketch that taps into the Internet** and can be passed around the house and carried from room to room to check the latest headlines, e-mail, stock quotes and even the school lunch menu. The Intel Web Pad will sell for about $500.

The Web Pad works by having a radio link between the pad and a desktop machine with a dedicated phone line to give it round-the-clock access to the Internet. There is no keyboard, but users can call up an image of a keyboard to type with a special pen.

■ **Tohnichi America Corp. offers their STC Digital Torque Screwdriver.** It's a ratchet-based screwdriver/nutdriver with interchangeable tips that includes a digital display and input buttons. The computer can store up to 100 different torque readings, and shuts itself off when not in use. It can display torque measurements in metric, Newton or English and can download all of its memory to a PC or a printer. A microswitch can tell the user when a set torque limit has been reached, and it can be programmed to tell the operator if he has not turned all of the bolts in a certain application. This helps reduce human error.

■ **Some industrial applications generate a great deal of static electricity,** which attracts unwanted dust and debris. A large, bar-shaped air ionizer fits within or near the machinery and generates 5,000 volts, eliminating the problem. (An ordinary TV set, thanks to the high voltage required to illuminate the cathode-ray tube, attracts a good deal of dust in a short time.)

■ **Some electronics manufacturers are "doping" their solder with special polymers** to make it melt at lower temperatures. This eases the stress of solder installation, and there is no flux to remove afterwards. Very fine traces can be applied in this manner.

■ **Long-distance telephone companies are losing money due to the Internet.** E-mail is faster and cheaper, and Internet telephony doesn't require excessive funds, either. Research suggests that U.S. telephone companies will lose up to $3 billion in the next five years, due to real-time audio conversations over the Internet. (With the right computer equipment, a conversation overseas costs only as much as a local call.)

■ **To see what everything and everyone else in the world is doing,** click on <http://www.earthcam.com>. Here you can look at video snapshots from museums, zoos, offices, stores, and who-knows-what.

■ **What do you do with an old cassette deck, CD player, or VCR after it's worn out and/or not worth repairing?** Most people simply heave it into the trash (or, if you're like most hams, you cannibalize it for parts). But people in Norway are being asked to return their old consumer-electronic gear to retail outlets for recycling. Customers pay an extra fee for recycling when they purchase new equipment.

■ **You may be familiar with the Doppler shift, the change of frequency transmitted from a moving object.** The pitch of a satellite's radio signal changes dramatically as you listen to it. Now, Doppler shift is the principle behind measuring liquid flow rate in industrial applications. Marsh-McBirney's Flo-Dar flowmeter transmits an ultrasonic beam of RF energy into a moving fluid. The fluid reflects that signal at a different frequency. Flo-Dar then determines how fast the fluid is moving, and in which direction.

■ **Helically polarized antennas are often used in satellite communications because of the polarity shift of radio waves.** Some fiber-optic cables now come in a helix shape, but it has nothing to do with signal polarity; the twisting adds mechanical strength to the fragile fiber, preventing microcracks and strains that could degrade signal performance. Most stress in an optical fiber occurs during in-

stallation.

■ **The airline Virgin Atlantic plans to avoid any potential "millenium bug" problems** on December 31, 1999 by simply grounding their entire fleet from that day until the next.

■ **Liberty Labs, of Kimballton, Iowa, has finished construction of the world's largest ground plane for antenna calibration.** It measures 80 meters long by 50 meters wide, about the same amount of land as a football field. It cost half a million dollars to build but can be rented for a couple of days (with their technical staff to assist) for far less than it would cost to build your own antenna test chamber.

■ **Lasers are normally used to remove unwanted material to shape a part, much like carving a figurine out of a block of wood.** But Lockheed-Martin is using lasers to fuse metal powder directly into three-dimensional shapes. Sometimes it is easier to build a part this way than it is to carve it out of a block. The technique originated at the Sandia National Labs in Albuquerque, NM.

EMERGING COMMUNICATIONS

■ **Some houses of worship are recruiting telecommunications companies** because they can offer something that's in short supply: a place to put their radio equipment. With zoning laws and community opinion often keeping needed cellular telephone towers out of desired locations, the utilities have learned to hide transceiving equipment inside items that attract no public scorn, such as church steeples. The churches earn a steady source of income and the utilities don't have to build new towers from scratch.

■ **You would think that Japan – the world's second largest economy – would also be number 2 in Internet domain name registrations.** But they are in last place on the first quarter 1999 Top-15 chart of web site registrations.

According to *Network Solutions* (the sole Internet registrar at present) the United States accounted for nearly three-quarters of all ".com, .net and .org" registrations. Canada is a distant No. 2 - followed by the U.K., France, Germany, Sweden, Spain and Italy.

China, the highest-ranking Asian nation. came in at ninth place, India in 11th

place, South Korea in 13th and Hong Kong was 14th. Japan's slow domain name registrations is caused primarily by its complicated telecommunications regulations.

■ **You can get free long distance telephoning over the Internet** with "MediaRing Talk 99" – a software-based PC-to-PC Internet Telephony system. The latest version is MediaRing Talk 99. Once installed, the application runs quietly in the background when your PC is on. Calls can be made to any other PC with the MediaRing Talk application installed, and Internet access via a normal telephone modem. See: < http://www.mediaring.com/ >.

■ **It's a common pastime for people to play hooky from work and school** when there's a ball game to watch. During rare occasions when the Texas Rangers baseball team play day games during the week, so many cellular telephones try to get on the air at the same time in *The Ballpark in Arlington* that the system becomes overloaded. One telecommunications firm is looking into installing a dedicated microcell for the ballpark, so calls will always be able to get through.

■ **Research companies say the future of LEO satellite telecommunications is bright** but it is sure getting off to a rough start! LEO's operate by up and downlinking from a low-flying constellation of strategically placed satellites.

"Iridium," the world's first global LEO satellite telecommunications company could be bankrupt within 30 days. Its first two-month extension has expired and Iridium World Communications has now received another extension (until June 30th) from its lenders to meet certain customer and revenue targets.

It must triple the number of customers (to 27,000) and greatly increase its revenue. So far, Iridium is not coming close to its goals.

Technical problems with the handsets that tap into the $5 billion 66-satellite network are said to be resolved. The company is planning to announce sharp price cuts for its handset and airtime.

The firm recently replaced its key top executives including its CEO. Iridium's shares have deteriorated on the NASDAQ and are now selling down 85% from its 52-week high. Motorola owns 18% of Iridium and has guaranteed much of the company's $800 million debt.

The *Wall Street Journal* reported that Motorola is now reducing its partici-

pation in Teledesic – the $9 billion LEO satellite project headed up by Microsoft and cellular phone pioneer, Craig McCaw. The 288-satellite Teledesic "Internet-in-the-sky" network had been scheduled to begin service in four years but is behind schedule.

COMPUTER HARDWARE/SOFTWARE

■ **Want to check your e-mail from the kitchen while you have your morning cup of coffee?** You can with iPhone ($299) manufactured by CIDCO (Morgan Hill, CA.) This combination Internet appliance and desk telephone has an internal modem and a 7.5-inch LCD touch screen. There is even a small keyboard that stores under the phone. A blinking light tells you when you have e-mail waiting. A small CIDCO printer is available if you want to copy your e-mail. Requires an ISP account. It isn't a full PC, but it is a handy gadget. Check: < http://www.cidco.com/iphone/specs.html >

■ **Computing power is slowly migrating from mainframes to desktop computers and workstations.** Intel's 64-bit Merced microprocessor is a step closer in this direction. The main reason for this change is economics: it costs far less these days to set up a powerful desktop PC than a mainframe computer; in some cases, up to a thousand times less.

■ **Few lines move as slowly as registration at college.** Computers are supposed to make our lives easier, so some schools are trying on-line registration. Each student logs into a campus database and is assigned a certain number of "points" to be used in "bidding" for courses. The highest bidders get into those classes. No more standing in line for hours to find out that the one class you need is closed out.

■ **A new term in computer graphics has come into being: "render farming."** Rather than tie up one master computer for hours to perform the millions of complex calculations required to generate one image, the work is farmed out to an entire network of computers, each working on its own piece of the puzzle. Render farming can cut image rendering time by up to 80%.

■ **With computer prices dropping, one wonders why some people have never bought one.** It is a combination

of several factors. Some people are uncomfortable with new technology because they don't know enough about it; others think they can't afford it; and still others see no reason to buy a computer because they don't think it could make their lives any better. More than half of Americans without a computer are over retirement age, and the vast majority of those see no practical reason for owning a computer.

■ **Some airlines are experimenting with small computers that airframe technicians can wear.** Transparent goggles show their usual work, augmented with a "heads-up" image of repair manual information. This means technicians don't have to keep referring to paper-based manuals, can keep both hands free, and can literally see illustrations match the working equipment.

■ **The Door-to-Door CoPilot hardware/software package keeps a driver from ever getting lost.** CoPilot comes with software for your laptop computer and a GPS receiver. The voice-activated system lets you keep both hands on the wheel and your eyes on the road as the system not only shows a real-time map on the display, it also talks to you and tells you when and where to make your turn.!

■ The tailor-of-the-future could be a computer! **Tape measures and fitting rooms might become obsolete if "body scanning" and "virtual try-ons" catch on.** "Mass-customization" is a new lower-cost "automatic" method of making custom-fit clothing. Upscale custom clothing manufacturers are testing it. Underwear-clad fashion shoppers enter a small closet to get their body scanned. Computer graphics can show customers how they will look when various styles, fabrics, colors and patterns are combined. Software downloads the customer's "blueprint" directly into the cutting machine.

■ **Curiously, Microsoft will let you have a beta version of Windows 2000.** This is a "work-in-progress" program that has not yet been debugged. Plenty of programmers are eagerly buying it already, shelling out $60 for the honor. Most of us will wait until the final product becomes available, so we won't have to buy it twice (hopefully, it will be free of errors by then).

■ **In security-sensitive environments, computer networks can immediately identify authorized users via an RF tag.** An ID badge embedded with RF-

tagging circuitry can be interrogated by the computer network via an extra serial port. When the user leaves the room, his ID tag goes out of range of the RF-tagging equipment and the network automatically logs off the user.

■ **The NaturallySpeaking Recorder from Dragon Systems is a handheld voice recorder that translates the spoken word into text for your word processor.** It records your voice as a .WAV file (digitally recorded audio) and downloads that file into your PC through a serial port. Setup takes a couple of hours, as it takes that long for the software to "learn" a voice with proficiency. The voice-to-text device runs from two AA batteries and can hold up to 40 minutes of messages. It's not perfect, featuring a 90% comprehension rate.

INTERNET NEWS

■ **Many countries are taking an iron-fisted position on Internet access.** In the North African country of Algeria, for example, the commission in charge of licensing Internet Service Providers (ISPs) disqualified all of the private (4 out of the 5) applicants. It did, however, agree to license a state-owned enterprise, the 'Etablissement de Teledifussion Algerienne' (ETA), a move by the government to control the new medium. Algeria now has two ISPs..

■ **The Go Network portal site has been redesigned.** Infoseek Corp. has now been transformed into the GO Network branded site and its search engine delivers results 30 percent faster from a 50 percent larger library. Similar to Yahoo, the new faster loading home page can be personalized to your needs. Major investors include the Walt Disney Co., ABC and ESPN which has begun an extensive national advertising campaign.

■ **Fast food restaurant to join information revolution!** Burger King opened a new franchise last month in Hartford, CT which offers two Internet surfing stations with an option of adding up to 20 more terminals. Customers purchasing Burger King combo meals will be allowed 15 minutes of "filtered" Internet surfing. No "adult" content or e-mails are allowed. An inside store webcam will be added this summer.

■ **If you receive a copy of an e-mail that mentions a 5¢ e-mail tax being**

proposed, trash it and forget it! It is a hoax.

An e-mail that got its start in Canada is now being widely circulated in the United States. The Canadian version is from a Kate Turner - supposedly an assistant to Richard Stepp of the law firm of Berger, Stepp and Gorman, Barristers at Law, 216 Bay Street, Toronto, ON MIL 3C6. It warns "Under proposed legislation Canada Post will be attempting to bilk email users out of 'alternate postage fees'. Bill 602P will permit the Federal Govt to charge a 5 cent surcharge on every email delivered, by billing Internet Service Providers at source. The consumer would then be billed in turn by the ISP."

On April 21, 1999 the *Toronto Sun* ran a story entitled, "Cyberspace tax e-mail is nothing but a hoax."

The U.S. version shows Richard Stepp to be an Attorney at Law at 216 Concorde Street, Vienna, Va. Its story is that "The U.S. Postal Service is claiming that lost revenue due to the proliferation of email is costing nearly $230 million in revenue per year. Since the average citizen received about 10 pieces of email per day in 1998, the cost to the typical individual would be an additional 50 cents per day, or over $180 dollars per year, above and beyond their regular Internet costs. Note that this would be money paid directly to the U.S. Postal Service for a service they do not even provide."

■ **Juno, the initial free e-mail company, which just went public** is in the process of changing its direction. Juno originally felt that its future was in advertising. It offered free e-mail in exchange for personal demographic information on users who were matched to advertising messages. It thought customers preferred "Free" to paying $19.95 a month.

Major portals -- such as Yahoo, Excite, Snap and the Microsoft Network (MSN) -- also began offering free e-mail and millions of people were signed up ...complete with Internet access to the Web. There are more than 10 million MSN free "Hotmail" e-mail accounts alone -- nearly 5 times more than Juno. Furthermore, the portals are growing and Juno isn't. Now Juno is launching two pay services. *Juno Gold*, at $2.95 a month, is an enhanced email offering that lets users send and receive photos, documents and other attached files. *Juno Web* offers traditional Internet access at $19.95 a month.

So far, Juno has more than 90,000 subscribers to its upgraded email service

and 125,000 users have full Internet access. Most of these paying subscribers are from its current user base, but Juno is launching a new marketing campaign to get subscribers.

The Juno initial public offering has gotten off to a rocky start. It went public on May 27th on the NASDAQ (under the symbol JWEB) at $13.00 share and quickly fell below its offering price.

■ **Prodigy Communications will pay $50-$75 million for Cable & Wireless's consumer and business Internet service.** The amount is dependent on the number of customers which make the transfer. Your author's (Fred/W5YI) e-mail address will be changing *again* when regulatory approval has been obtained for the transfer.

We were originally an MCI Internet customer but MCI was forced to divest themselves of their Internet assets (which were sold to UK-based Cable & Wireless) as a condition to merge with WorldCom. Now Cable & Wireless is transferring these Internet dial-up customers to Prodigy. The transition may not come about for several weeks.

■ **Louisiana leaders are considering using an Internet voting system** in a Republican party primary election on January 29th. The state of Louisiana could leap ahead of Iowa and New Hampshire with next year's first presidential preference vote. A company called "VoteHere" is working on the Internet election system. Check out: <http://www.VoteHere.net>

■ **Cutting through the clutter of the web.** Encyclopedia Britannica is spending big bucks to become an advertising-supported consumer information site. See: <http://www.britannica.com>. The site will be in addition to their sister site at: <http://www.eb.com> which offers pay subscriptions of their articles ...primarily to schools and libraries. The new site offers much of the same data and e-mail as other consumer portals. But what it does better -- is provide an excellent search engine to reference websites which have been reviewed by the Britannica editors.

■ **The tiny South Pacific Island nation of Tonga is joining Tuvalu in marketing their top level Internet domain name.** Tonga is assigned ".to" and Tuvalu, ".tv." Tonga has already registered about 15,000 ".to" domains at $100 each! For example: check out: <http://www.jump.to>. A sliced red tomato (and nothing else) appears at:

<http://www.toma.to> Note there is no ".com," ".net," or ".org"!

■ **American Online (and four other new registrars) will be joining Network Solutions** on June 24th in selling ".com," ".net," and ".org," Internet addresses. Network Solutions, Inc. (NSI) has had a monopoly in the Web address naming business since 1993. A shared registry database will continue to be maintained by Network Solutions. The new registrars will pay NSI a database maintenance fee.

WASHINGTON WHISPERS

■ **It is back to square one for the FCC's campaign to crack down on telephone "slamming."** MCI Worldcom challenged the FCC's ruling in federal court that would have allowed consumers a 30 day "no pay" period while phone customers challenged disputed "slamming" ...the practice of illegally changing long distance service from one carrier to another without permission.

MCI wanted the rules suspended to give the commission more time to consider an industry plan to address the problem. AT&T, MCI WorldCom, Sprint and associations representing smaller long-distance companies support creating a third-party group to handle consumers' slamming complaints. The FCC received a record 20,000 slamming complaints in 1998

■ **The government already is distributing nearly $1.7 billion in subsidies to schools and libraries** for telecommunications needs, including Internet access. But FCC Chairman Bill Kennard says it isn't enough. He wants the full $2.25 billion annual authorization to wire the nation's 528,000 public school classrooms to the Internet. The program provides schools and libraries with computer and Internet access discounts ranging up to 90 percent.

The program was scaled back last year after consumer groups and some lawmakers feared it would lead to higher phone bills. Kennard received the support of FCC Commissioners Susan Ness and Gloria Tristani so the full $2.25 billion will now be distributed. Demand from schools and libraries is estimated to total $2.435 billion.

Educators, librarians and the Clinton administration support the additional $1 billion in funding. The Republicans and consumer groups do not -- primarily because the funds are collected from consumers through additional fees on their telephone bills.

Kennard believes that residential telephone bills will not increase since the fees would be offset by $1 billion worth of reductions which become effective July 1. He also pointed out that the average consumer's phone bill has dropped in price from two years ago, and that long distance rates are "plummeting."

Rep. Billy Tauzin, R-La., and Sen. Conrad Burns, R-Mont., plan to offer legislation replacing the existing funding with money currently collected through an existing federal excise tax on phones.

■ **Now comes word that Telephone taxes could be increased even further!** Determined not to have a nation of "haves" and "have nots", farm-state Senate democrats are pushing for government subsidized high speed Internet access for rural areas.

Under the 1996 telecom law, remote areas are supposed to have telecommunications services that are "reasonably comparable" to those in cities. Rural states want the funding extended to rural businesses, farmers and health-care facilities. Congress left the decision on how to fund the subsidies up to the FCC.

■ **The U.S. is in danger of running out of area codes and phone numbers.** The United States now has about 215 area codes, almost twice as many as in 1991. Industry officials project the need for 30 new codes a year unless changes are made. But there really is no shortage! The fact is that most of the U.S. phone numbers earmarked for use go unused and the FCC intends to do something about it.

At present, phone companies are issued blocks of 10,000 numbers – whether or not they need them. The commission is considering reducing this to 1,000 and requiring phone companies to return unused phone numbers into a pool which would then be reissued.

The FCC also proposed to require telephone companies to assign more of their numbers before requesting new blocks. And blocks of numbers might not be free in the future. Phone companies might have to pay for them in the future.

Since the 1996 Telecom Act deregulated the industry – and driven by the need for cell phone and paging numbers and second lines for Internet access and fax machines – new phone companies have been sprouting up everywhere. It is esti-

mated, however, that – as a group – they use only 5% of the numbers they are allotted.

The bottom line is that of the nearly one billion allocated phone numbers, nearly two-thirds are still unused! There are already four numbers allotted for every man, woman and child in the country.

■ **The United States is not the only country that has problems with low-power unlicensed broadcast stations.** Israeli air traffic controllers (ATCs) staged a one hour strike on May 25th to protest ground-to-air communication system interference by pirate radio stations in the area which have increased significantly recently

The ATCs closed Ben Gurion International Airport for the hour and urged pirate radio station operators to stop interfering with control tower frequencies otherwise they would cause an air disaster. There have already been several near collisions.

The police say that there are about 100-150 pirate radio stations in Israel with most of them concentrated around Tel Aviv where the airport is situated. The micropower stations make high profits and cost little to operate. They return to the air quickly from a different location once they are raided. Adding to the problem is that the Israeli justice system seldom sends station owners to jail and the fines are small.

A meeting between the ministers of police, communications and transport was held to discuss the issue.

■ **Free speech on the Internet dept. The U.S. Government may regulate Internet presidential parody sites!** The World Wide Web will play a key part in the year 2000 presidential campaign. All candidates have staked out online campaign headquarters. But it is getting hard to tell the real from the lampoon sites.

For example, the official George Bush for president site is at <http://www.georgebush.com.> But there is a very uncomplimentary site at <http://www.gwbush.com> which closely resembles the official Bush site. Time magazine reported that the Bush campaign has already bought sixty Web site addresses to keep the competition from using them ...including <http://www.bushsux.org>.

Gwbush.org – as well as gbush.org – is owned by Boston computer guru Zack Exley but the content is supplied by RTMARK – a group opposed to corporate destruction of the U.S. political and electoral system. Exley reportedly said he

would sell his Bush domains for $350,000.

The Federal Election Commission is now looking into the matter since Exley has not registered as a political committee which is required when its net worth exceeds $1,000.

■ **The Australian Senate has passed controversial Internet content regulations** that has civil libertarians and Internet Service Providers (ISPs) up in arms! The Online Broadcasting Services Bill authorizes the Australian Broadcasting Authority to investigate complaints about Web sites and to order Australian content providers to take down illegal, violent, pornographic or offensive pages.

If the pages are hosted overseas. ISPs must block access to the pages if it is "technically feasible". Fines of up to US$18,000 per day will be imposed on providers if they do not remove access to the illegal or offensive material. The *Internet Industry Association* (IIA) also vented its disapproval of the Bill and many Australian ISP's turned their Web pages black in protest.

AMATEUR RADIO

■ **The** *Radio Society of Great Britain* **reported** that the 136 kHz (LF) distance record was broken on the 12th of May, when OH1TN had a CW contact with IK5ZPV at a distance of 2120 km - about 1,500 miles.

■ **Want to know when and where you can see the orbiting International Space Station** and the Space Shuttle from the ground? Point your Web browser at <http//spaceflight.nasa.gov/realdata/-sightings>. Construction of the International Space Station is now back on track.

■ **Most hams know that you can pick up the National Institute of Standards and Technology (NIST) atomic clock announcements on the HF bands.** But you can also listen to it by phone by dialing (303) 499-7111. If you'd like to see the Atomic Web Clock on your computer, click on: <http://-www.bldrdoc.gov/timefreq/javaclck.htm>

■ **Robert Swan, WA6ZJG, of Alameda, CA, has a video camera installed on the top of his tower.** By visiting <http://citynight.com/camera> on the Internet, you can use your computer to see what the camera sees. An on-screen menu lets you, the viewer, command the camera to pan left or right.

■ **K1MAN FILES LIBEL LAWSUIT AGAINST FCC** - The following *Press Release* was issued by K1MAN *[Quote]*

"A lawsuit for libel seeking $10 million in damages was filed May 27, 1999 in Kennebec, Maine Superior Court against the Federal Communications Commission and the United States Justice Department by Glenn Baxter, K1MAN, founder of AARA, the *American Amateur Radio Association.*

"The libel suit stems from an "FCC News" piece published in *QST* magazine in 1990 and several 1995 FCC letters to big name United States Senators and Congressmen stating that the Commission had made a 'determination' that K1MAN had caused 'willful interference' to radio communications which is both a violation of Part 97 rules and also a felony under sections 333 and 501 of the 1934 Communications Act.

"The *COMPLAINT* alleges that the Commission was intentionally, recklessly, maliciously, publicly, and knowingly wrongfully impugning a felony to K1MAN for his scheduled timer controlled *Amateur Information Bulletin Service* (known as IARN, the *International Amateur Radio Network)* which is no different from the American Radio Relay League's timer controlled W1AW transmissions which have been in daily operation since 1914.

"Baxter also claims that his administrative appeal of this matter was illegally and criminally obstructed by FCC staff people who would have been very embarrassed for the actual facts of the case to be brought out in open court.

"Count II of the $10,000,000 libel suit is against the Unites States Department of Justice for a letter written in 1995 which was subsequently published on the Internet and has been read by over 500,000 people to date.

"Glenn Baxter, K1MAN, in commenting about this very unusual lawsuit said that: 'This thing between the FCC and K1MAN, which has been going on for over twelve years now, is finally coming to a head. The Commission has made some gigantic, intentional, and malicious errors in handling a fairly simple administrative matter, and it is now time for us to finally face off in court in front of a jury. The jury will not find this obvious FCC corruption and absolute abuse of power very amusing. Only in America is it truly possible to get *'Equal Justice Under Law.'*

Baxter said that a copy of the Court papers (the *COMPLAINT* and all the attached exhibits) is now available to anyone who is interested by sending a large manila business envelope with enough return postage for six ounces to K1MAN. *[End quote]*

■ According to a feature story in the May 1999 issue of *Morsum Magnificat* - a pro-Morse code publication out of Great Britain - New Zealand's national ham radio society has proposed to its Ministry of Commerce a new licensing method for HF operation.

NZART - the *New Zealand Association of Radio Transmitters* - wants to eliminate the present 6 and 12 wpm Morse code testing. "There will no longer be a formal requirement for a Morse test at any speed."

The "Entry" grade (previously called "Novice") will require a 50% passing grade on regulations and 30% passing grade on theory. It yields all mode operation on 2-meters, 144-148 MHz. CW will be permitted between 3525 - 3625 MHz.

An applicant achieving a 50% pass rate on the theory examination will qualify for a Technician license which yields all modes and frequencies above 30 MHz.

After a six month period of completing 25 QSOs with 25 different stations, the Entry and Technician level applicants qualify for additional all mode operation between 21.10 – 21.20 MHz and 28.10 – 28.60 MHz.

When a 50% passing grade is achieved on the theory examination - plus completion of the 25 CW contacts, an applicant may apply for the "General" grade which yields full amateur privileges.

The story's author, Tony Smith, G4FAI points out that there is nothing in the international Radio Regulations that requires administrations to carry out Morse testing ...nor is any minimum speed of transmission or reception specified.

NZART also proposes that the process can be speeded up if applicants obtain a "Voluntary Morse Achievement Certificate" at 12 wpm.

"The New Zealand Ministry of Commerce, has now been asked to consider the proposal." The article did not mention how the 25 CW contacts were to be made, or how amateurs would insure that they meet the international Radio Regulations which specifies "sending by hand and transcribing by ear." Today's PCs can easily copy and transcribe code.

AMATEUR RADIO STATION CALL SIGNS
...sequentially issued as of the first of June 1,1999:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0IS	KI0QE	(***)	KC0FXZ
1 (*)	AA1UK	KE1LW	(***)	KB1EDI
2 (*)	AB2GC	KG2QJ	(***)	KC2FET
3 (*)	AA3SL	KF3DH	(***)	KB3DWU
4 (*)	AF4OY	KU4ZZ	(***)	KG4DOJ
5 (*)	AC5SU	KM5VG	(***)	KD5HIR
6 (*)	AD6IT	KR6BM	(***)	KF6WLK
7 (*)	AC7BB	KK7TE	(***)	KD7FQO
8 (*)	AB8EF	KI8IQ	(***)	KC8MOQ
9 (*)	AA9XE	KG9PT	(***)	KB9UUM
N. Mariana	NH0N	AH0BC	KH0HZ	WH0ABM
Guam	(**)	AH2DK	KH2UF	WH2AOA
Hawaii	NH7Z	AH6PT	KH7TX	WH6DFZ
Am. Samoa	AH8R	AH8AH	KH8DO	WH8ABI
Alaska	AL0P	AL7RM	KL0TE	WL7CVC
Virgin Isl.	(**)	KP2CP	NP2KK	WP2AIK
Puerto Rico	WP3F	KP3BM	WP3DA	WP4NOP

* =   All 1-by-2 & 2-by-1 call signs have been assigned.

** =   All 2-by-1 call signs have been assigned.

***=   Group "C" (N-by-3) call signs have now run out in all but the 1st and 3rd call district.

Note: New prefix numerals now being assigned in Puerto Rico, Hawaii and Alaska.

[Source: FCC Amateur Service Database, Washington, DC]

NEW AND UPGRADING AMATEUR STATISTICS
For the Month of May 1997, 1998 & 1999

License Class	New Amateurs 1997	1998	1999	Upgrading Amateurs 1997	1998	1999
Novice	97	70	57	3	4	0
Technician	2633	1411	1453	14	21	0
Tech Plus	237	199	157	457	341	317
General	31	19	18	430	334	215
Advanced	8	2	2	316	237	239
Extra Class	7	5	2	235	172	134
Club/Empty	272	177	37	9	11	0
Total:	**3285**	**1883**	**1720**	**1464**	**1120**	**905**
Decrease:	**(3%)**	**(43%)**	**(9%)**	**(20%)**	**(23%)**	**(19%)**

CANADA PROPOSES TO DEREGULATE HAM RADIO

Industry Canada, the federal telecommunications regulatory agency in Canada, has proposed to streamline their amateur radio authorization process by basically doing away with licensing. In short, *Industry Canada* proposes to make the Amateur Radio Operator Certificate the sole authorization document.

Eliminated would be the amateur radio license as well as the license issuance fee and the $24 annual renewal fee. The operator certificate would be modified to include the operator's assigned call sign. The complete documentation can be found on the *Industry Canada* web site at: <http://strategis.ic.gc.ca/SSG/sf01709e.html>

Amateur Radio Certificates (which are granted when an amateur passes the required examinations) are valid for lifetime. But – at present – the Canadian station license must be renewed yearly and is valid until the end of the fiscal year (March 31st). *Industry Canada* automatically sends out a renewal notice in January or February.

In addition, *Industry Canada* has asked for comments on a proposal that would allow individuals holding an Amateur Radio Operator Certificate with Basic and 5 wpm Morse code qualifications to operate in the 28.0 MHz to 29.7 MHz (10 meter) band. The Basic qualification permits all band operation above 30 MHz.

The proposal is in response to a request from their national ham radio society, *Radio Amateurs of Canada* (RAC) a year ago. The RAC said "Many Canadian radio amateurs believe that this would be an important step for the growth and stability of the amateur radio service and would provide amateurs, who now meet basic international requirements, with the opportunity to operate world wide long distance (DX) communications and to increase their HF operating skills. This proposal would encourage operators with only a Basic Qualification to learn Morse code and increase the overall number of amateurs with HF knowledge and skills." Details on the proposal and how to make comments before June 30, 1999 are posted at: <http://strategis.ic.gc.ca/SSG/sf01772e.html>

THE INTERNET OF THE FUTURE!

"I ask Congress to step up support for building the next generation Internet. It's getting kind of clogged, you know. And the next generation Internet will operate at speeds up to a thousand times faster than today." (From President Clinton's 1998 State of the Union address.)

The U.S. government first developed the Internet in the 1960s to help government and academic researchers communicate on government defense projects. The current Internet emerged from the collaborative effort of academic and federal research networks in the 1980's.

Forrester Research says the number of online accounts in the United States alone will triple to nearly 80 million within three years! Many of those accounts – Forrester says 16 million – will access the Net over high speed cable or DSL (telephone) connections that are up to 50 times faster than today's 56-Kbps modems.

The approaching bandwidth crisis could force out many of the local Internet Service Providers (ISPs) out of business. Right now, cable connections can handle speeds up to 3 Mbps ...and DSL hookups run between 256 Kbps and 1.5 Mbps. Three years from now, your Internet connection will be much faster, your monthly Internet bills higher, and your choice of service providers greatly diminished. You will routinely be watching TV on the Internet.

Right now, there are approximately 5000 ISPs in the U.S. Within a year or so, that number will drop dramatically. Their future will probably be in Web hosting to businesses.

Later this year, Sprint will begin rolling out its new Integrated On-demand Network (ION) which will deliver voice, video, and data at speeds up to 620 Mbps. Consumers and businesses might be able to purchase an ION Integrated Service Hub at their local Radio Shack store for $200 to $300, about the cost of a DSL or cable modem today. The box will be wired to your telephone system and a card in your PC. At prices starting around $100 a month you will have a constant high-speed Internet connection, videoconferencing, local calling with Caller ID, and virtually unlimited long-distance calling from Sprint.

The Washington, D.C.-based Teledesic is currently constructing a network of 288 LEO (low earth orbiting) satellites to connect remote ISPs to the fiber backbone. The satellite network is scheduled to be completed in 2003, and two-way connections should hit speeds of up to 64 Mbps for downloads, 2 Mbps for uploads. LEO satellite constellations are particularly well suited to telecommunications since there is no signal delay such as exists when communications must travel to and from a geosynchronous satellite located 22,000 miles high over the equator..

Internet2 and the Abilene Project

Internet2 (I2) is a similar cooperative effort to develop an advanced Internet for the new millennium. The project is aimed at creating an ultra-fast, experimental computer network with speeds 45,000 times faster than the best telephone modems people now use to surf the Web. Speeds that fast could transmit the entire Library of Congress in just 20 seconds!

The Next Generation Internet (NGI) Research Act of 1998 authorized appropriations of $109 million for fiscal years 1999 and 2000 for the Next Generation Internet program. It was signed by the President on Oct. 28, 1998 and became Public Law No105-305. Included among the program objectives are(1) increasing Internet capabilities and improving Internet performance; (2) developing an advanced test bed network connecting research sites; and (3) developing advanced Internet applications that meet national goals and agency mission needs.

The need for the implementation of NGI is due to the incredible success of the Internet. Since 1988, the Internet has grown at nearly 100% per year and the Internet traffic has been growing at a rate of nearly 400% per year. The current Internet not only is experiencing a huge growth rate but it is also in need of higher bandwidth for multimedia applications.

The U.S. Government's attention to this need has allowed for very intense research and development in this area. The goal of NGI initiative "is to conduct R&D in advanced networking technologies, to demonstrate those technologies in test beds that are 100 to 1000 times faster than today's Internet and to develop and demonstration on those test beds revolutionary applications that meet important national needs that cannot be achieved with today's Internet." Internet2 has a strong relationship with NGI (Next Generation Internet).

The U.S. Government, industry and more than 150 U.S. universities are now working together to develop the network which will enable such applications such as real time remote control telemedicine, broadcast-quality video, digital libraries, real time telecommuting, advanced weather forecasting, distance learning, virtual laboratories and other capabilities which are not possible with today's Internet.

They have formed into a consortium called the University Corporation for Advanced Internet Development (UCAID). The commercial sector and the educational community ....especially K-12 and public libraries will be the early beneficiaries.

Dozens of high-tech software, hardware and telecommunications companies are either a corporate sponsor or member of the Internet2 effort. MCI/Worldcom Corporation's very high performance Backbone Network Service, provided under a cooperative agreement between the National Science Foundation and MCI, served as the initial Internet2. The just launched $500 million "Abilene" high-speed coast-to-coast network is the new Internet2.

The Abilene Project, which operates over fiber-optic cable running along railroad rights-of-way, is named after a railhead established in Abilene, Kansas, during the 1860s. In its time, the ambitious railhead of the 1800s staked a claim on what was then the frontier of the United States.

The Abilene Project establishes a similar presence from which to explore and develop pioneering network technology. The links of last century's railway changed the way people worked and lived. The vision of the Abilene Project is to transform the work of researchers and educators into the next millennium.

It is comprised of 13,000 miles of fiber-optic cabling linking some 70 research centers. Abilene currently operates at 2.4 Gigabits per second and will eventually operate at 9.6 GB. To put that in perspective, one gigabit per second is 18,000 times faster than a 56 Kbps modem.

The Internet2 project is also defining the next version of the Internet Protocol, IPv6 (Internet Protocol version 6). An advantage of IPv6 is that it lengthens IP addresses from 32 bits to 128 bits and allows for the creation of more IP addresses ...an identified future problem as more of the world signs on. Internet2 is not going to replace the current Internet; instead it will become a supplement to the Internet providing the current Internet with greater capabilities at faster transmission speeds.

Corporate "partners" that have contributed "hundreds of millions" in equipment, funding, infrastructure and other resources toward to the Internet2 project include 3-Com, Ameritech, AT&T, Cisco, IBM, Lucent Technologies, MCI/Worldcom, and Microsoft. For more information, check out the Internet2 Web site at <http//www.internet2.edu>